

AN 1997:270561 HCAPLUS

DN 126:251935

TI ***Preparation*** of ***polyester*** composite having good heat resistance, mechanical properties, toughness, processability, and appearances

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SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

PI JP 09048908 A2 970218 Heisei

AI JP 96-134968 960529

PRAI JP 95-134305 950531

DT Patent

LA Japanese

IC ICM ***C08L067-02***

ICS ***C08G063-16*** ; ***C08K003-34*** ; ***C08K009-04***

CC 37-6 (Plastics Manufacture and Processing)

AB Title composite contain cation-exchange-capable org. compd.-modified layered compds. highly dispersed in monolayer level in thermoplastic ***polyesters***. Thus, 200 g ***montmorillonite*** (ion exchange capacity 1.2 mequiv/g) was dispersed in water, then 120 g 12-aminododecanoic acid hydrochloride was added, and stirred 2 h at 70.degree., filtered, and vacuum-dried. A mixt. of 10 g the above product and 1350 g 1,4-butanediol was heated 4 h at 80.degree. with irradiation of 40 kHz ultrasound, then esterified by adding 1250 g terephthalic acid and 0.8 g tetra-Bu titanate to obtain a ***poly*** (***butylene*** ***terephthalate***) composite which was injection molded at 80.degree. to give a test piece showing tensile yield strength 60 MPa, tensile elongation at break 145%, flexural yield strength 95 MPa, flexural modulus 2710 MPa, heat distortion temp. 91.degree. (18.6 kg/cm²), Izod impact strength 142 KJ/m², and yellow color after dried heat test.

ST ***montmorillonite*** cation exchange ***polyester*** composite

IT Cation exchangers

Composites

Heat-resistant materials

Impregnation

Sound and Ultrasound

(***prepn*** . of ***polyester*** composite having good heat resistance, mech. properties, toughness, processability, and appearances)

IT ***Polyesters*** , ***preparation***

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(***prepn*** . of ***polyester*** composite having good heat resistance, mech. properties, toughness, processability, and appearances)

IT 38613-77-3

RL: MOA (Modifier or additive use); USES (Uses)

(hind phenol; ***prepn*** . of ***polyester*** composite having good heat resistance, mech. properties, toughness, processability, and appearances)

IT 24936-69-4P, Poly(1,4-cyclohexylene dimethylene terephthalate)

24968-12-5P , 1,4-Butanediol-dimethyl terephthalate copolymer, sru ***25037-99-4P*** , Poly(1,4-cyclohexylene dimethylene terephthalate) ***25038-59-9P*** ,

preparation ***26062-94-2P*** , 1,4-Butanediol-

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terephthalic acid copolymer ***30965-26-5P***

1,4-Butanediol-dimethyl terephthalate copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(***prepn*** . of ***polyester*** composite having good heat resistance, mech. properties, toughness, processability, and appearances)

IT 107-64-2, Dimethyldioctadecyl ammonium chloride ***1318-93-0D***

, ***Montmorillonite*** , aminododecanoic acid-modified

1319-41-1D, ***Saponite*** , aminododecanoic acid-modified

6683-19-8 ***12173-47-6D*** , ***Hectorite***

((Mg_{2.67}Li_{0.33})Si₄Na_{0.33}[F_{0.5-1}(OH)_{0-0.5}]2010), aminododecanoic

acid-modified 22543-30-2D, 12-Aminododecanoic acid hydrochloride, reaction products with ***montmorillonite*** , ***hectorite***

, or ***saponite*** 32130-27-1D, reaction products with ***montmorillonite***

RL: MOA (Modifier or additive use); USES (Uses)

(***prepn*** . of ***polyester*** composite having good heat resistance, mech. properties, toughness, processability, and appearances)